matic cycle. With the additional closing of contact R4–3 on conductor 139 control relay CR2 is energized, which control relay CR2 opens contact CR2–2 on conductor 144 which releases the brake and the closing of contacts CR2–1 on conductor 143 energizes clutch 51 of the main index drive unit 48 which imparts rotation to the control drum (not shown) in housing 108 to begin the sequence of operations. With motor 48 energized, lever arm 58 reciprocates the carriage 39 along the guideways 36 and 37 described above. However, no tape will be transported toward the cutting device until the index cylinder 44 is energized to clamp the tape between the piston rod 45 and the projection 47 on carriage 39. The drum control unit through the cams thereon closes initially switch DS1 on conductor 148 thereby energizing solenoid A designated SV1–A of solenoid operated valve SV1 which supplies pressurized fluid from a suitable source such as tank 109 to the head end of pneumatic cylinder 44 thereby extending the piston rod, and clamping the tape 17 between the piston rod and the upper projection 47 on carriage 39. Reciprocation of carriage 39 moves the tape between the respective guide blocks 33 and 34 for movement past the cutter on the table 89. Upon completion of the forward stroke of carriage 39, switch DS3 is closed by the rotatable drum which in turn energizes solenoid B designated SV3–A of solenoid operated valve SV–3 which connects pressurized conduit with conduit 112 which moves the clamping block 68 downwardly to secure the tape in a fixed position on table 89. Simultaneously with such action, drum switch DS2 is closed by the rotatable drum thereby energizing solenoid B (SV1–B) of solenoid operated air valve SV–1 which connects the head end of pneumatic cylinder 44 with exhaust thereby releasing the piston rod 45 from the tape 17 permitting carriage 39 to return rearwardly without effecting the position of the tape on the clamping block 68. The rotatable drum then closes contact DS7 on conductor 152 energizing ratchet relay RR which opens contact CRR–2 and closing contact CRR–1 on conductors 153 and 154, respectively, which energizes solenoid A or SV4–A of solenoid operated air valve SV–4 thereby extending the piston rod of pneumatic cutter cylinder 75 pivoting the cutter blade 85 downwardly about pivot 86 to sever the stock that is held in position on table 89 by the clamping block 68. Further movement of the piston rod 78 by the toggle links 81 and 82 retracts the cutter blade 85 away from the table 89 in preparation for the next cutting operation. The drum switch then closes contact DS4 on conductor 151 which energizes solenoid B (SV3–B) of solenoid operated air valve SV–3 which pressurizes the rod end of pneumatic clamp cylinder 70 thereby raising the clamping block 68 away from the blade 69'. The drum then closes contact DS–5 which energizes the magnetization of the table 89 which flattens the severed tape 17 on the table thereof as well as the previously cut spliced stock. Such action conditions the tape for the splicing action. Drum switch DS6 is then opened which de-energizes the magnetization of the table 89 simultaneously with the closing of contact DS8 on conductor 155 which controls the energization of solenoid A (SV2–A) of solenoid operated valve SV–2 which controls the energization of the head end of pneumatic splicer cylinder 94 which moves the splicing plate 92 rightwardly as viewed in FIG. 2 to splice the severed section of tape 17 with the previously cut portion as described above. Drum switch DS9 is then closed closing the contact on conductor 156 which energizes solenoid B (SV2–B) of solenoid operated valve SV–2 which controls the pressurization of the rod end of pneumatic splicer cylinder 94, thereby retracting the splicing plate to the position shown in FIG. 2. Photoelectric cell 104 located above the spliced portion closes contact PR3–1 and opens contact PR3–2 on conductors 146 and 147, respectively, upon having its beam interrupted, which action energizes the air clutch 98 of motor 97 thereby driving sheave 99 and roller 100 which in turn moves the spliced stock away from the splicing zone in preparation for the next splicing operation. Upon movement of the spliced stock at a point beyond the photoelectric cell 104, the beam of light detects the absence of stock, thereby closing contact PR3–2 and opening contact P3–1 to interrupt the output of motor 97 to the driven sheave 99 through clutch 98. To facilitate movement of the spliced stock away from the splicing zone, additional advancing means may be provided to accelerate the movement of such stock or, if desired, a pair of electric eyes may be located to move the stock at different rates of speed to facilitate such movement. The cycle of operation described above is repeated as additional tape sections are clamped and then spliced to the web which sections form the fabricated web or wire overhead unit which has the plural strands of wire that are disposed at an angle to the longitudinally extending center line of the web.

Various modifications are contemplated and may obviously be resorted to by those skilled in the art without departing from the invention, as hereinafter defined by the appended claims, as only a preferred embodiment thereof has been disclosed.

We claim:

1. A machine for fabricating a continuous web having angularly disposed wire strands relative to its longitudinal center line from narrow strips cut from a continuous wire coated narrow width tape having wire strands that are parallel relative to the longitudinal center line of such narrow width tape, comprising a support; said support having a pair of spaced elongated guideways defining guide means; a wire tape index feeding means mounted on said support for movement thereon to feed a narrow width tape along said guide means; said feeding means including means for moving such tape in a direction along its longitudinal center line a specific distance at definite intervals of time; cutting means having a cutting blade disposed diagonally relative to said longitudinal center line of said tape and diagonally relative to said longitudinal direction of said feeding means for cutting said wire-coated tape at a bias angle; means operatively connected to said cutting means for actuation thereof to sever a section of tape; a splicing table positioned adjacent to said cutting means for receiving coated wire tape from said feeding means on movement of said tape past said cutting means; clamp means mounted adjacent to said cutting means and cooperative therewith during actuation of said cutting means; splicing means mounted on said table for movement in a direction parallel to said center line of said longitudinal web for splicing a severed section of tape to a previously cut strip of tape which forms said bias wire coated web and magnetizing means are operatively connected to said splicing table for selective magnetization and de-magnetization thereof to flatten and condition the wire coated tape on said table for a splicing operation.

2. A machine for fabricating a continuous web as set forth in claim 1 wherein said splicing means includes a movable plate member slidable on said table, said plate member having a recess along its leading edge portion adjacent said table for captively engaging said severed tape section, power operated means operatively connected to said plate member for moving said plate member in a direction parallel to said web center line for moving said tape section into abutting engagement with ssaid strip of bias-cut wire coated web for adherence thereto, and means for actuating and deactuating said power operated means.

3. A machine for fabricating a continuous web as set forth in claim 2 wherein control means are operatively connected to said magnetizing means for coordinating the control of said magnetization in timed relationship to said actuation and deactuation of said power operated means wherein said table is de-magnetized followed by actuation of said power operated means.